



200381

Five-Year Review Report

Five-Year Review Report
for
Summit Equipment & Supply, Inc. Site
Akron
Summit County, Ohio

August 2003

Prepared By:



Region 5
United States Environmental Protection Agency
Chicago, Illinois

Approved by:

Date:

Donald J. Bruce for

William E. Muno, Director
Superfund Division
U.S. EPA Region 5

8/1/03

Table of Contents

List of Acronyms	iii
Executive Summary	v
Five-Year Review Summary Form	vii
I. Introduction	1
II. Site Chronology	2
III. Background	3
A. Physical Characteristics/Land and Resource Use	3
B. History of Contamination	4
C. Initial Response	4
D. Basis for Taking Action	8
IV. Remedial Action	8
A. Remedy Selection	8
B. Remedy Implementation	9
C. System Operations/O&M	10
V. Progress Since the Last Five-Year Review	10
VI. Five-Year Review Process	10
A. Administrative Components	10
B. Community Involvement and Notification	11
C. Interviews	11
D. Site Inspection	11
E. Document Review	12
F. Risk Information Review	12
G. Data Review	13
VII. Technical Assessment	14
A. Technical Assessment Summary	15
VIII. Deficiencies/Issues	15
IX. Recommendations and Follow-Up Actions	16
X. Protectiveness Statements	16
XI. Next Review	16

Tables

Table 1 - Remediation Goals for Soil	9
Table 2 - Summary of MCL Exceedances at SES site	13

Attachments

Attachment 1 - Site Maps and Five-Year Review Site Inspection Photographs	17
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List of Acronyms

AOC	Administrative Order by Consent
ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation and Liabilities Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
DLA	Defense Logistics Agency
DMW	Deep Monitoring Well
DRMS	Defense Reutilization and Marketing Service
ECC	Environmental Chemical Corporation
ICI	International Consultants, Inc.
IT	International Technology Corporation
MCLs	Maximum Contaminant Levels
mg/kg	milligrams per kilogram
MNA	Monitored Natural Attenuation
MW	Monitoring Well
NCP	National Contingency Plan
NPL	National Priorities List
OEPA	Ohio Environmental Protection Agency
PCBs	Polychlorinated biphenyl
PCE	tetrachloroethene
ppm	parts per million
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act
RG	Remedial Goal
RI	Remedial Investigation
ROD	Record of Decision
SDWA	Safe Drinking Water Act
SES	Summit Equipment and Supply, Inc.
SVOCs	Semi-volatile organic compounds
TCE	trichloroethane
TCLP	Toxic Characteristic Leaching Procedure
TSCA	Toxic Substances Control Act
ug/L	micrograms per liter
USACE	United States Army Corps of Engineers
US EPA	United States Environmental Protection Agency
UXO	Unexploded Ordnance
VOCs	Volatile Organic Compounds
WTI	WasteTron, Inc.

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Executive Summary

This is the first Five-Year Review completed for the Summit Equipment and Supply, Inc. (SES) site in Akron, Ohio. The results of the Five-Year Review indicate that the remedy is protective of human health and the environment. Overall, the removal of polychlorinated biphenyl (PCB)-contaminated soil with offsite disposal was accomplished successfully, and continued groundwater monitoring at the site shows consistently diminishing concentrations of Contaminants of Concern (COCs).

SES Soils

The June 30, 1998 Record of Decision (ROD) for SES selected excavation of PCB-contaminated soils for offsite disposal for SES soils. Soil removal activities commenced at the SES site in September 1998, with over 65,000 tons of soil eventually being excavated and shipped for disposal. Closeout of this aspect of the remedy was documented in the *Interim Remedial Action Report - Removal and Disposal of Contaminated Soil at the Summit Equipment and Supply, Inc. Site, Akron, Ohio*, dated August 8, 2002.

SES Groundwater

For the remediation of groundwater, monitored natural attenuation (MNA) was chosen in the June 1998 ROD. The ROD also stipulated that if future monitoring of site wells indicated that adequate natural attenuation was not occurring, US EPA would require more active treatment methods for addressing the groundwater contamination. Groundwater monitoring results, which have been obtained from five sampling events conducted in November 1995, October 1998, May 1999, February 2002, and September 2002, indicate that the concentrations of the COCs in groundwater at the SES site are decreasing and that natural attenuation of site contaminants is occurring. Therefore, the MNA remedy is expected to be protective of human health and the environment.

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Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name (from WasteLAN): Summit Equipment and Supply, Inc.		
EPA ID (from WasteLAN): OHDO55523401		
Region: 5	State: Ohio	City/County: Summit County
SITE STATUS		
NPL status: <input type="checkbox"/> Final <input type="checkbox"/> Deleted <input checked="" type="checkbox"/> Other (specify) Cleanup under AOC - CERCLA Equivalent		
Remediation status (choose all that apply): <input type="checkbox"/> Under Construction <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Complete		
Multiple OUs? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Construction completion date: ___ / ___ / ___	
Has site been put into reuse? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
REVIEW STATUS		
Lead agency: <input checked="" type="checkbox"/> EPA <input type="checkbox"/> State <input type="checkbox"/> Tribe <input type="checkbox"/> Other Federal Agency		
Author name: Timothy J. Fischer		
Author title: Remedial Project Manager	Author affiliation: US EPA, Region 5, Superfund	
Review period:** 04 / 22 / 2003 to 07 / 11 / 2003		
Date(s) of site inspection: 05 / 13 / 2003		
Type of review: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="checkbox"/> Post-SARA <input type="checkbox"/> Pre-SARA <input type="checkbox"/> NPL-Removal only </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input checked="" type="checkbox"/> Non-NPL Remedial Action Site <input type="checkbox"/> NPL State/Tribe-lead </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="checkbox"/> Regional Discretion </div>		
Review number: X 1 (first) <input type="checkbox"/> 2 (second) <input type="checkbox"/> 3 (third) <input type="checkbox"/> Other (specify)		
Triggering action: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="checkbox"/> Actual RA Onsite Construction at OU # _____ <input checked="" type="checkbox"/> Actual RA Start at Site </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="checkbox"/> Construction Completion <input type="checkbox"/> Previous Five-Year Review Report </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="checkbox"/> Other (specify) </div>		
Triggering action date (from WasteLAN): 08 / 10 / 1998		
Due date (five years after triggering action date): 08 / 10 / 2003		

* ["OU" refers to operable unit.]

** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

Five-Year Review Summary Form, cont'd.

Deficiencies:

No Deficiencies were identified during this Five-Year Review.

Recommendations and Follow-up Actions:

- (1) Site groundwater monitoring should be maintained on a semiannual basis for volatile organic compounds, inorganics, and natural attenuation parameters.
- (2) Institutional Controls should be placed upon the property before it is reused by the owner or transferred to another party.

Protectiveness Statement(s):

The remedy at the SES site is protective of human health and the environment.

Other Comments:

The Defense Logistics Agency has proposed eliminating monitoring wells MW-2, MW-3, MW-6, MW-10, MW-11, and DMW-1 from the future monitoring network, due to the fact that they have never shown elevated levels of site contaminants. US EPA has approved of the abandonment of all of these wells, with the exception of MW-6. This well is being kept in the monitoring network for the time being in order to maintain adequate site coverage.

Summit Equipment and Supply, Inc. Five-Year Review Report

I. Introduction

EPA Region 5 has conducted a Five-Year Review of the remedial action implemented at the Summit Equipment and Supply, Inc. (SES) site in Summit County, Ohio. The review was conducted from April 2003 to July 2003, and this report documents the results of the review. The purpose of Five-Year Reviews is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify deficiencies found during the review, if any, and identify recommendations to address them.

This review is being conducted as a matter of policy, even though the SES site is not on the National Priorities List (NPL). EPA must implement Five-Year Reviews consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA §121(c), as amended, states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

The NCP part 300.430(f)(4)(ii) of the Code of Federal Regulations (CFR) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

This is the first Five-Year Review for the SES site. The triggering action for this review is the start date of the remedial action at the site, which is August 10, 1998. Due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unrestricted use and unlimited exposure, another Five-Year Review is required.

II. Site Chronology

DATE	EVENT
July 1986	Ohio Environmental Protection Agency collects soil samples at the SES site in response to a complaint about improper handling of PCB transformers at the site. Concentrations of up to 74,000 ppm are detected.
February 1987	US EPA conducts a site investigation to determine if PCBs have migrated off of the SES site.
March 1987	US EPA notifies site owner and operator, Benjamin Hirsch, of the need to undertake a removal of hazardous substances.
March - September 1987	US EPA conducts an emergency removal action to stabilize the SES site and bring offsite contaminated soils onto the site in order to mitigate threats to the public health. Extensive sampling of the SES site also takes place, along with the installation of the first four groundwater monitoring wells.
September 1989	US EPA sends a Notice of Liability letter to US Defense Logistics Agency (DLA).
June 1990	US EPA sends Notice of Liability letters to eight other potentially responsible parties (PRPs) which sold materials containing hazardous substances to SES.
September 1990	The US Department of Justice, on behalf of US EPA, files a complaint under CERCLA in the US District Court to recover costs in connection with the SES site.
1990	A site screening inspection is conducted as a step toward Hazard Ranking Scoring for the SES site and possible listing on the National Priorities List (NPL).
April 1991	US EPA conducts a second emergency removal action after observed site conditions have deteriorated, including holes in the fencing allowing trespassers access to the site, and the disturbance of covers for staged contaminated soil piles.
July 23, 1991	An Administrative Order on Consent is executed between US EPA and the Defense Logistics Agency (DLA) calling for the cleanup of the SES site under CERCLA.

DATE	EVENT
November 1991	DLA initiates a Phase I site removal action to characterize and segregate site scrap materials, and then remove them from the site. The action is conducted by the United States Army Corps of Engineers (USACE) and IT Corporation on behalf of DLA.
Spring 1993	International Consultants, Inc. (ICI) initiates a Remedial Investigation (RI) of the SES site on behalf of DLA.
Fall 1995	Additional groundwater investigation is conducted by ICI on behalf of DLA.
1995	972 cubic yards of PCB-contaminated soil are removed from the Castle Apartment complex located adjacent to the SES site.
Spring 1996	Additional "hot spot" and soil pile sampling are conducted by ICI.
Spring 1997	An interim removal action is conducted at the SES site to remove the contaminated soil piles that were being staged at the site.
June 30, 1998	A ROD is signed for the SES site selecting excavation and offsite disposal for PCB-contaminated soil and monitored natural attenuation of site groundwater.
August 10, 1998	Remedial Action starts at the SES site with Pre-Construction Meeting.
September 1998- December 2000	Excavation of over 65,000 tons of PCB-contaminated soil is completed at the SES site and the first two groundwater sampling events take place.
February 2002	The first "low-flow" groundwater sampling event is conducted at the SES site.
April 2003	US EPA approves reduction in number of site wells required for long-term groundwater monitoring based upon five rounds of groundwater sampling. Monitoring will continue indefinitely on a semiannual basis for the remaining site wells.
August 2003	First Five-Year Review is completed for the SES site.

III. Background

A. Physical Characteristics/Land and Resource Use

The SES site (USEPA Site #OHDO55523401) is located at 875 Ivor Avenue, approximately one half mile south of I-76 and the I-277/State Route 224 interchange in the southwest portion of Akron, Ohio (See map in Attachment 2). The site is bordered by the Akron - Barberton Beltway

Railroad tracks to the north; a low-lying woodland and marsh to the east; a residential area on Ivor Avenue to the south; and a light industrial area to the west. The marsh to the east of the salvage yard is immediately adjacent to Lake Nesmith, a local recreation area. The SES site consists of about seven and a half acres of property and it was used by the site owner, Benjamin Hirsch, as a salvage yard and scrap metal facility from the 1950s to the 1980s.

B. History of Contamination

Among the salvage materials brought to the SES site from the late 1960s until 1979 were large numbers of transformers containing PCB oils. Operations at SES included the storage of large quantities of materials, including transformers and batteries, intended for scrap and reclamation. In the early 1970s, batteries were recycled and metals from electrical equipment were smelted onsite in a small furnace, with oils reclaimed from the transformers reportedly providing the fuel for the furnace. These activities resulted in widespread PCB contamination of soils at the site and off-site migration of PCBs to adjacent areas. These site operations also resulted in the contamination of the groundwater aquifer beneath SES with volatile organic compounds (VOCs) and chromium, including hexavalent chromium.

C. Initial Response

The following is a summary of the regulatory and enforcement history associated with SES, taken from the June 30, 1998 site ROD:

Ohio Environmental Protection Agency (OEPA) Investigations (1986)

The OEPA collected soil samples from the SES site in July 1986, in response to a complaint made to the Akron Police Department regarding improper handling of PCB transformers at the site. These samples indicated PCB contamination in the soil ranging from 180 parts per million (ppm) to 74,000 ppm. As a result, OEPA notified the property owner to clean up the site and informed the US EPA of the high level of PCB contamination detected at the site.

United States Environmental Protection Agency Investigation (1987)

Beginning in February 1987, a site investigation was conducted by the US EPA to determine if PCB contamination had migrated beyond the SES fence line. Soil samples were collected in the parking area to the south of the salvage yard, in the drainage ditch along the northern boundary of the salvage yard, and in areas such as gullies, ditches, and storm water drains where the presence of PCBs would indicate migration from the salvage yard. Samples from the parking area to the south of the site contained PCB contamination up to 16 ppm, while three samples from the northern boundary ditch contained PCB contamination ranging from 550 ppm to 8,700 ppm. Seventeen samples collected from the Castle Apartment area contained PCBs with concentrations ranging from 1 ppm to 75 ppm.

Sampling within the salvage yard consisted of surface samples to determine the lateral extent of contamination, test pits and soil borings to determine the vertical extent of contamination, and groundwater samples to determine the impact of site contamination on shallow groundwater. Scrap and electrical equipment overlying the majority of the site limited sampling points to those areas where surface soils were exposed. Samples were collected in areas where transformers or large electrical devices with capacitors were observed, in areas of visible soil staining, or where there was evidence of tampering with transformers. Samples were also collected in channeled and ponded runoff water areas. A summary of sample locations and results can be found in the Scoping Plan (ICI, 1992) and in the Extent of Contamination Report (TAT, 1988). Of the 130 samples analyzed, 54 contained PCB concentrations greater than 50 ppm, with 44 of these greater than 100 ppm and 18 greater than 500 ppm. The highest concentration detected in the salvage yard was 78,000 ppm.

US EPA Emergency Removal Action (March - September 1987)

From March to September 1987, US EPA conducted an emergency removal action designed to stabilize the SES site and mitigate threats to the public health, welfare and environment caused by PCB migration offsite. Approximately 300 capacitors and 1,300 transformer carcasses were removed from the site. Four hundred sixty cubic yards of soil were excavated from offsite areas and stockpiled within the SES site boundaries. Four groundwater monitoring wells were also installed in May 1987 during the emergency response action at the SES site.

Site Screening Inspection (1990)

A site screening inspection was conducted in 1990 as an intermediate step to determining a Hazard Ranking Score for the SES site. This was completed for the possible listing of the SES site on the National Priorities List (NPL). Five surface soil samples (including one background sample) and three groundwater samples were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides/PCBs, metals, and cyanide. Ten other surface soil samples were analyzed only for pesticides/PCBs (Ecology and Environment, 1991). Five samples had PCB concentrations ranging from 50 ppm to 2,300 ppm. One background soil sample was collected from Lisa Ann Park, located approximately one-half mile west of the salvage yard at the end of Ivor Avenue. No PCBs were detected in this background sample. For sampling locations and analytical results refer to the Site Screening Inspection Report (Ecology and Environment, 1991).

Second US EPA Emergency Removal Action (April 1991)

During a site visit in December 1990, US EPA representatives observed a deterioration in site conditions. Trespassers had gained access to the site, and soil piles that had been placed onsite and covered during the 1987 emergency removal action were uncovered. In April 1991, US EPA was advised by OEPA that a fire had occurred on the SES site. Investigators determined that three separate fires had occurred and that the materials burned included rubber tires, hoses, and

wire insulation. However, the additional burning of PCB-containing oils was not ruled out. Site stabilization was initiated by upgrading site security and re-drumming PCB-contaminated soils that were being staged in damaged drums. Further actions planned for this response could not be executed because military ordnance was discovered on the site during the removal action.

Removal Action - November 1991

In September 1989 US EPA sent a Notice of Liability letter to the Defense Logistics Agency (DLA), informing them that US EPA had determined that they were a potentially responsible party (PRP) at the SES site. US EPA and DLA entered into an Administrative Order by Consent (AOC), which was executed on July 23, 1991, requiring DLA to continue future site investigations and remedial action. In compliance with the requirements of the AOC, a Phase I site action was initiated by DLA to characterize and segregate clean and contaminated scrap on the SES Site. This removal action was conducted by the United States Army Corps of Engineers (USACE) and International Technology (IT) Corporation. The intent of this action was to secure the site against vandalism and casual access by the public; to construct staging areas for clean and contaminated scrap; and to segregate, inventory, and stage PCB items, cylinders, drums, scrap, and ordnance. The contaminated scrap was decontaminated and sold to a smelter prior to the commencement of site characterization activities. Action taken at the site included the following:

- Decontamination of approximately 4,000 cubic yards of scrap material;
- Disposal of 2,000 tons of contaminated scrap, motors, and stone;
- Disposal of over 160 drums containing various items including furnace residue, metal grinding dust, mercury contaminated soils, PCB contaminated oil, nonhazardous waste oil, paint residue, and miscellaneous batteries;
- Disposal of over 432 cubic yards of tires and 219 tons of building demolition debris;
- Disposal of two large transformer carcasses totaling 2,500 pounds;
- Disposal of three mercury rectifiers and eight compressed air cylinders;
- Demolition of the former concrete block office and scale building; and
- Removal of the stone staging pad and liner system and stockpile on the SES site and restoration of the neighboring Hamlin Steel property to near original condition.

Ordnance, including practice ammunition and smoke grenades, was also physically removed from the site and sent to the US Army's Ravenna Army Ammunition Plant in Ravenna, Ohio, for destruction. Prior to this removal action by IT Corporation, the salvage yard was covered over most of its surface with piles of scrap and debris as high as 30 feet. The piles were not sorted but were aggregate heaps of sheet metal, structural steel, wire, tires, electrical equipment, batteries and other miscellaneous debris.

International Consultants, Inc. (ICI) Remedial Investigation (1993)

In the spring of 1993, ICI conducted a Remedial Investigation (RI) of the SES site. This program was undertaken on behalf of DLA at the direction of the USACE, Huntsville Division. ICI conducted sampling in all areas of concern, including the salvage yard, northern fence line, the western fence line, the eastern fence line, the support zone, the Castle Apartments complex, the Lake Nesmith area, and the marsh, including the Summit North Ditch. In addition to collecting soil samples, five new shallow monitoring wells were installed and sampled.

ICI Remedial Investigation (1995)

As a result of data gaps identified for site hydrogeology and groundwater contamination, an additional groundwater investigation was conducted in the fall of 1995. During this investigation one deep monitoring well, three shallow monitoring wells, and ten hydro punches were installed. In addition to collecting groundwater samples from the site, two samples were collected from temporary piezometers installed downgradient of the site. Samples were analyzed for VOCs, heavy metals, hexavalent chromium, and water quality parameters. The results of this investigation are presented in the Groundwater Assessment Report (ICI 1996).

Castle Apartments Removal Action (1995)

Several site investigations, consisting of soil sampling, were conducted in the Castle Apartment area adjacent to the SES site. The presence of soil contaminated with elevated concentrations of PCBs led to a removal action in this area in 1995. Approximately 972 cubic yards of soil were excavated and staged on the SES site. Confirmatory sampling after the soil removal revealed no further contamination in this area. The Castle Apartment area was backfilled, graded, seeded, considered clean, and no further action was required.

Additional Sampling (1996)

USACE, Huntsville Division, contracted ICI to perform additional fieldwork during the spring of 1996. This work involved collecting soil samples from the six soil piles excavated from the Castle Apartment complex and staged onsite, two hot spot zones, and groundwater samples from four monitoring wells. Soil samples were analyzed for total metals and Toxicity Characteristics Leaching Procedure (TCLP) metals.

Interim Remedial Action (1997)

Late in the spring of 1997, Environmental Chemical Corporation (ECC) was contracted by the USACE, Nashville District, to remove and dispose of the six contaminated soil stockpiles from the SES site.

D. Basis for Taking Remedial Action

The human health risk assessment that was conducted as part of the remedial investigation at the SES site indicated that the potential cancer risk to a future site worker exposed to soil and groundwater would be 7×10^{-4} (seven in ten thousand). According to the NCP, carcinogenic risks from exposures at CERCLA sites are considered "acceptable" if they are within a 1×10^{-4} (one in ten thousand) to 1×10^{-6} (one in a million) risk range. Since the calculated potential risk at the SES site was greater than the acceptable risk in the NCP, it was decided that remedial action was appropriate to insure the protection of human health.

IV. Remedial Action

A. Remedy Selection

The only Record of Decision (ROD) for the SES site was signed on June 30, 1998. The remedial objectives were to:

- Minimize the potential for human exposure via incidental ingestion, dermal contact, and inhalation of soil contaminated with PCBs, copper, and mercury at concentrations that would result in an excess lifetime cancer risk greater than 10^{-4} or a hazard index greater than 1.0 based on the trespasser, industrial worker, and construction worker scenarios.
- Minimize the potential for PCBs, copper, and mercury to migrate from soil at the site to the groundwater.
- Minimize the potential for humans or wildlife to be injured from detonation of UXO.

The remedy for the SES site was selected to address two types of media: soil and groundwater.

The remedial action for soil at the SES site was

- Excavation and offsite disposal of soils contaminated with PCBs, copper, and mercury until established cleanup objectives were met; and
- Removal of unexploded ordnance (UXO) from the site.

The excavation and offsite disposal of contaminated soil was to continue until the remediation goals (RGs) identified in Table 1, on the next page, were attained. These RGs were developed using regulatory cleanup levels and considerations based on human health risks.

Table 1
Remediation Goals for Soil

PCBs (Aroclor-1260)	10 mg/kg
Copper	1,700 mg/kg
Mercury	20 mg/kg

The remedial action for groundwater at the SES site is

- Monitored natural attenuation of site groundwater to address hexavalent chromium and volatile organic compound (VOC) contamination.

The only remedial goal identified for SES groundwater is 500 micrograms per liter (ug/L) for hexavalent chromium [chromium (VI)]. VOCs are being monitored to insure that unacceptable concentrations are not allowed to reach Lake Nesmith, which is located downgradient of the site. Chromium (VI) is not expected to migrate from the SES site to downgradient areas due to the natural chemical processes which are taking place in site groundwater. Iron, which exists naturally in the groundwater beneath the SES site, is reacting with the chromium (VI) to form the more protective and less mobile trivalent chromium [chromium (III)]. Monitoring of the chromium and VOC concentrations was originally expected to continue for 30 years. In addition, institutional controls, in the form of deed restrictions, will be placed on the SES property to prohibit the installation of groundwater wells at the site in the future. This will prevent any exposure to unprotective levels of contamination in the groundwater at the SES site. The ROD also allowed for individual site monitoring wells to be removed from the monitoring program at the SES site, upon approval by US EPA, if they showed concentrations below drinking water standards or Maximum Contaminant Levels (MCLs) for the contaminants of concern for two consecutive sampling events. Finally, the ROD states that if future monitoring results indicate that adequate natural attenuation is not occurring, US EPA may require a more active treatment method for groundwater at the SES site.

B. Remedy Implementation

The remedial design for the site was started in June 1998, and Work Plans were completed in September 1998. The plans called for excavation to begin at the site in September 1998 and for the first groundwater monitoring event to take place at the same time. An onsite meeting was held on August 10, 1998 between all of the concerned parties, including US EPA and OEPA, to discuss final logistics and give approval for clearing, grubbing, and UXO clearance to begin at the site (this action triggered this initial Five-Year Review).

Excavation of contaminated soil at the SES site took place between September 14, 1998 and November 8, 2000. A total of approximately 65,825 tons of contaminated soil, debris and other

waste were shipped offsite for disposal. More details with respect to the excavation effort at the SES site can be found in the *Final Interim Remedial Action Report - Removal and Disposal of Contaminated Soil at the Summit Equipment and Supply, Inc. Site - Akron, Ohio*, dated August 8, 2002. In all, 134 grids were excavated at the site until the residual PCB concentration was less than 10 mg/kg, as specified by the ROD for the site. The average residual PCB concentration left at the shallow depth of zero to four feet was 2.42 mg/kg (with a range of 0-10 mg/kg). The average backfill depth for the site is 3.84 feet. Based upon the average residual PCB concentration, which is approximately one-fourth the allowable level, and the average soil coverage of almost four feet, the remaining risk level is significantly lower than that required by the ROD. The total cost associated with the excavation and offsite disposal of contaminated material was about \$11 million, which exceeded the original estimate in the ROD of \$7 million due to waste treatment and disposal issues.

In addition to the soil excavation, groundwater monitoring has been conducted at the SES site on five different occasions in November 1995, October 1998, May 1999, February 2002, and September 2002. A Summary of the results from these events is discussed in Section VI(G) of this report on page 13. A sixth groundwater sampling event was conducted on May 13, 2003, but results from this sampling event have not been obtained to date.

C. System Operations/O&M

There are no continuing treatment systems in operation at the SES site.

The only Operation and Maintenance (O&M) costs associated with the SES site remedy are associated with the continued groundwater monitoring being conducted. The cost associated with the groundwater monitoring at the SES site is about \$20,000 Per sampling event.

V. Progress Since the Last Five-Year Review

This is the first Five-Year Review for the SES site. The results of this Five-Year Review indicate that the remedy is protective of human health and the environment.

VI. Five-Year Review Process

A. Administrative Components

The SES site Five-Year Review was led by Timothy J. Fischer, Remedial Project Manager for the SES site. The following team members assisted in the review:

- Bruce Noble, DRMS Project Manager
- David Meadows, USACE Project Manager

- Larry Antonelli, OEPA Remedial Project Manager

This Five-Year Review consisted of the following activities: a review of relevant documents (see Section VI(E) on page 12) and a site inspection (See photos in Attachment 1).

B. Community Involvement and Notification

A notice regarding the forthcoming review was placed in the local newspaper on June 30, 2003. The completed report will be available in the information repository and from US EPA Region 5. Notice of its completion, with a summary of findings, will be placed in the local newspaper and local contacts will be notified by letter.

C. Interviews

Specific Interviews were determined to be unnecessary for this Five-Year Review, since the only components of the remedy were soil excavation and disposal, which was successfully accomplished, and long-term groundwater monitoring, with results documented in a series of results reports. There is also no active community involvement at this site.

D. Site Inspection

Representatives of US EPA, USACE and WTI took part in a site inspection on May 13, 2003. During the site inspection, monitoring wells and fencing were inspected and groundwater monitoring efforts were observed. The inspection evaluated the overall condition of the property (vegetation and access restrictions) and the condition of the nine site monitoring wells. A summary of the inspection findings is presented below. Photographs taken during the inspection are included in Attachment 1.

Conditions during the inspection were favorable with mild temperatures and no precipitation. Site vegetation had not been mowed in several months and the ground was moist from recent rainfall, but not saturated. Re-seeding of the property following the excavation of contaminated soil has been successful, as the entire site is covered with vegetation. Several ducks and geese were also found habitating the site and the surrounding area. The fencing was intact around the entire perimeter of the site with no indication of tampering or vandalism. All of the monitoring wells also appeared to be in good condition, with locked and intact caps.

The site inspection was coordinated with the groundwater sampling schedule to observe the collection of samples from the site monitoring network. Samples were collected in accordance with the *Final Sampling and Analysis Plan - Summit Equipment and Supply, Inc. - Remedial Action Project for Long-Term Groundwater Monitoring*, dated December 2001, and were observed to be colorless and odorless. The laboratory results from this sampling effort have not yet been received, but will be included in a separate groundwater monitoring report to be issued later in 2003.

E. Document Review

The list of specific documents which were reviewed is shown below:

Final Remedial Investigation Report - Summit Equipment and Supplies, Inc. - Akron, Ohio, prepared for the US Army Corps of Engineers by International Consultants, Inc., February 3, 1995.

Record of Decision - Declaration, Decision Summary, and Responsiveness Summary For Final Remedial Action - Summit Equipment and Supply, Inc. - Akron, Ohio, prepared for the US Army Corps of Engineers by International Consultants, Inc. and signed by US EPA on June 30, 1998.

Final Interim Remedial Action Report - Removal and Disposal of Contaminated Soil at the Summit Equipment and Supply, Inc. Site - Akron, Ohio, prepared for the US Army Corps of Engineers by Environmental Chemical Corporation, August 8, 2002.

Summit Equipment and Supply, Inc. - Final Groundwater Monitoring Report - Sampling Event No. 1 Performed During October 1998, prepared by the US Army Corps of Engineers, April 1999.

Summit Equipment and Supply, Inc. - Final Groundwater Monitoring Report - Sampling Event No. 2 Performed During May 1999, prepared by the US Army Corps of Engineers, February 2000.

Groundwater Report No. 3 - Summit Equipment and Supply, Inc. Groundwater Monitoring - Services Related to Installation of Low Flow Monitoring Pumps, Well Construction, and Additional Groundwater Sampling and Analysis at the Summit Equipment and Supply Site - Akron, Ohio, prepared for the US Army Corps of Engineers by WasteTron, Inc., November 2002.

Groundwater Report No. 4 - Summit Equipment and Supply, Inc. Groundwater Monitoring - Akron, Ohio, prepared for the US Army Corps of Engineers by WasteTron, Inc., December 2002.

F. Risk Information Review

The following standards were identified as applicable or relevant and appropriate requirements (ARARs) in the ROD. They were reviewed for changes that could affect protectiveness:

- Safe Drinking Water Act (40 CFR Parts 141-146)
- Toxic Substances Control Act (40 CFR Part 761)
- RCRA Land Disposal Requirements (40 CFR Part 268)

Federal standards for the contaminants of concern have not changed since the signing of the ROD in June 1998.

G. Data Review

Groundwater monitoring has been conducted at the SES site on five different occasions in November 1995, October 1998, May 1999, February 2002, and September 2002. A Summary of the results from these events is shown in Table 2, below. The results of the continued monitoring at the site show that chromium levels have fallen below the remedial goal for the last sampling event, and, with the exception of TCE and PCE, all VOCs have fallen below the MCLs onsite. Although TCE and PCE have been consistently detected above their respective MCLs in monitoring wells MW-8 and MW-9, they have not been detected above their MCLs in downgradient site wells. This indicates that the VOC contamination is not migrating off of the SES site at significant concentrations.

Table 2 Summary of MCL Exceedances at SES site					
	11/1995	10/1998	5/1999	2/2002	9/2002
Hexavalent Chromium RG = 500 ug/L	4,100 ug/L (8)	3,900 ug/L (8)	2,300 ug/L (8) 3,700 ug/L (9)	1,200 ug/L (8)	No Exceedances
Trichloroethene (TCE) MCL = 5 ug/L	14 ug/L (8) 16 ug/L (9)	8.7 ug/L (8) 24.3 ug/L (9)	7.7 ug/L (8)	17 ug/L (8) 27 ug/L (9)	10.5 ug/L (8) 23 ug/L (9)
Tetrachloroethene (PCE) MCL = 5 ug/L	37 ug/L (8) 250 ug/L (9)	50 ug/L (8) 435 ug/L (9)	53 ug/L (8) 456 ug/L (9)	17 ug/L (8) 260 ug/L (9)	23 ug/L (8) 240 ug/L (9)
1,1,1-Trichloroethane MCL = 200 ug/L	270 ug/L (5)	No Exceedances	No Exceedances	No Exceedances	No Exceedances
Carbon Tetrachloride MCL = 5 ug/L	28 ug/L (5)	No Exceedances	No Exceedances	No Exceedances	No Exceedances
Benzene MCL = 5 ug/L	No Exceedances	No Exceedances	22.7 ug/L (9)	No Exceedances	No Exceedances

TABLE KEY

(8) - Number of the monitoring well where the exceedance took place (e.g. MW-8)

ug/L - micrograms per liter (equivalent to parts per billion)

All results for all wells *not shown* in the table are below applicable RGs or MCLs.

VII. Technical Assessment

The following conclusions support the determination that the remedy at the SES site is protective of human health and the environment.

Question A: Is the remedy functioning as intended by the decision documents?

- **Remedial Action Performance:** The excavation and offsite disposal of contaminated soil at the SES site was successfully completed in November 2000, and all remedial goals were attained. A total of 65,825 tons of material were removed from the site at a cost of \$11 million. The groundwater monitoring is still being successfully completed on a semiannual basis with the concentration of site contaminants consistently decreasing, and in some cases disappearing, in the groundwater.
- **Implementation of Institutional Controls and Other Measures:** Access to the site is still being controlled by metal fencing which surrounds the property. Eventually, this fencing will be removed and restrictions will be placed on the deed to the property which restrict future uses to industrial and which prevent the installation of any groundwater wells on the SES property.
- **Early Indicators of Potential Remedy Failure:** No early indicators of potential remedy failure were noted during the review. Costs and monitoring activities have been consistent with expectations.

Question B: Are the assumptions used at the time of remedy selection still valid?

- **Changes in Standards and To Be Considereds:** This Five-Year Review identified no changes in the Federal or State standards which were considered in the remedy selection process. Therefore, all relevant assumptions are still valid.
- **Changes in Exposure Pathways:** No changes in site conditions that affect exposure pathways were identified as part of the Five-Year Review. First, there are no current or planned changes in land use, and, in fact, access is currently restricted by physical controls. Second, no new contaminants, sources, or routes of exposure were identified as part of this Five-Year Review. Finally, the rate of decrease of contaminant levels in groundwater at the SES site is exceeding expectations at the time of the ROD, and no unacceptable concentrations of groundwater contaminants are migrating off of the SES site.
- **Changes in Toxicity and Other Contaminant Characteristics:** Toxicity and other factors for contaminants of concern have not changed.

- **Changes in Risk Assessment Methodologies:** Changes in risk assessment methodologies since the time of the ROD do not call into question the protectiveness of the remedy.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No additional information has been identified that would call into question the protectiveness of the remedy.

A. Technical Assessment Summary

The excavation of contaminated soil at the SES site took place between September 14, 1998 and November 8, 2000, with a total of approximately 65,825 tons of contaminated soil, debris and other waste being shipped offsite for disposal. More details with respect to the excavation effort at the SES site can be found in the *Final Interim Remedial Action Report - Removal and Disposal of Contaminated Soil at the Summit Equipment and Supply, Inc. Site - Akron, Ohio*, dated August 8, 2002. In all, 134 grids were excavated at the site until the residual PCB concentration was less than 10 mg/kg, as specified by the ROD for the site. The average residual PCB concentration left at the shallow depth of zero to four feet was 2.42 mg/kg (with a range of 0-10 mg/kg). The average backfill depth for the site is 3.84 feet. Based upon the average residual PCB concentration, which is approximately one-fourth the allowable level, and the average soil coverage of almost four feet, the remaining risk factor is significantly lower than that required by the ROD. The total cost associated with the excavation and offsite disposal of contaminated material was about \$11 million, which exceeded the original estimate in the ROD of \$7 million due to waste treatment and disposal issues.

Groundwater monitoring has been conducted at the SES site on five different occasions in November 1995, October 1998, May 1999, February 2002, and September 2002. The results of the continued monitoring at the site show that chromium levels have fallen below the remedial goal for the last sampling event, and, with the exception of TCE and PCE, all VOCs have fallen below the MCLs onsite. Although TCE and PCE have been consistently detected above their respective MCLs in monitoring wells MW-8 and MW-9, they have not been detected above their MCLs in downgradient site wells. This indicates that the VOC contamination is not migrating off of the SES site at significant concentrations. The trends in the groundwater data over the last ten years indicate that the groundwater remedy will probably be complete by the time of the next required Five-Year Review in August of 2008.

VIII. Deficiencies/Issues

There were no deficiencies identified during the Five-Year Review for the SES site, and the site remains protective of human health and the environment. Site access has been adequately controlled, the soil removal was successful in meeting all remedial objectives, and the monitoring wells at the site are not damaged or deficient in any way. Groundwater contamination

concentrations are also decreasing, as expected in the ROD for the site.

IX. Recommendations and Follow-Up Actions

The only remaining actions to be completed at the site are the continued groundwater monitoring until concentrations of contaminants meet all appropriate cleanup standards (MCLs). Sampling will continue on a semiannual basis, although, as more acceptable results are obtained, DLA may petition to reduce the number of wells or the number of analytes for continued sampling. The fence will remain around the property until groundwater monitoring is complete and restrictions on the reuse of the property have been placed in the deed. Future use of the property will be restricted to industrial, and a restriction on the installation of additional groundwater wells will be required. Either US EPA or DLA will be able to implement these restrictions through legal authority, and this will be accomplished prior to the transfer of ownership of the SES site from Mr. Hirsch to a third party.

X. Protectiveness Statements

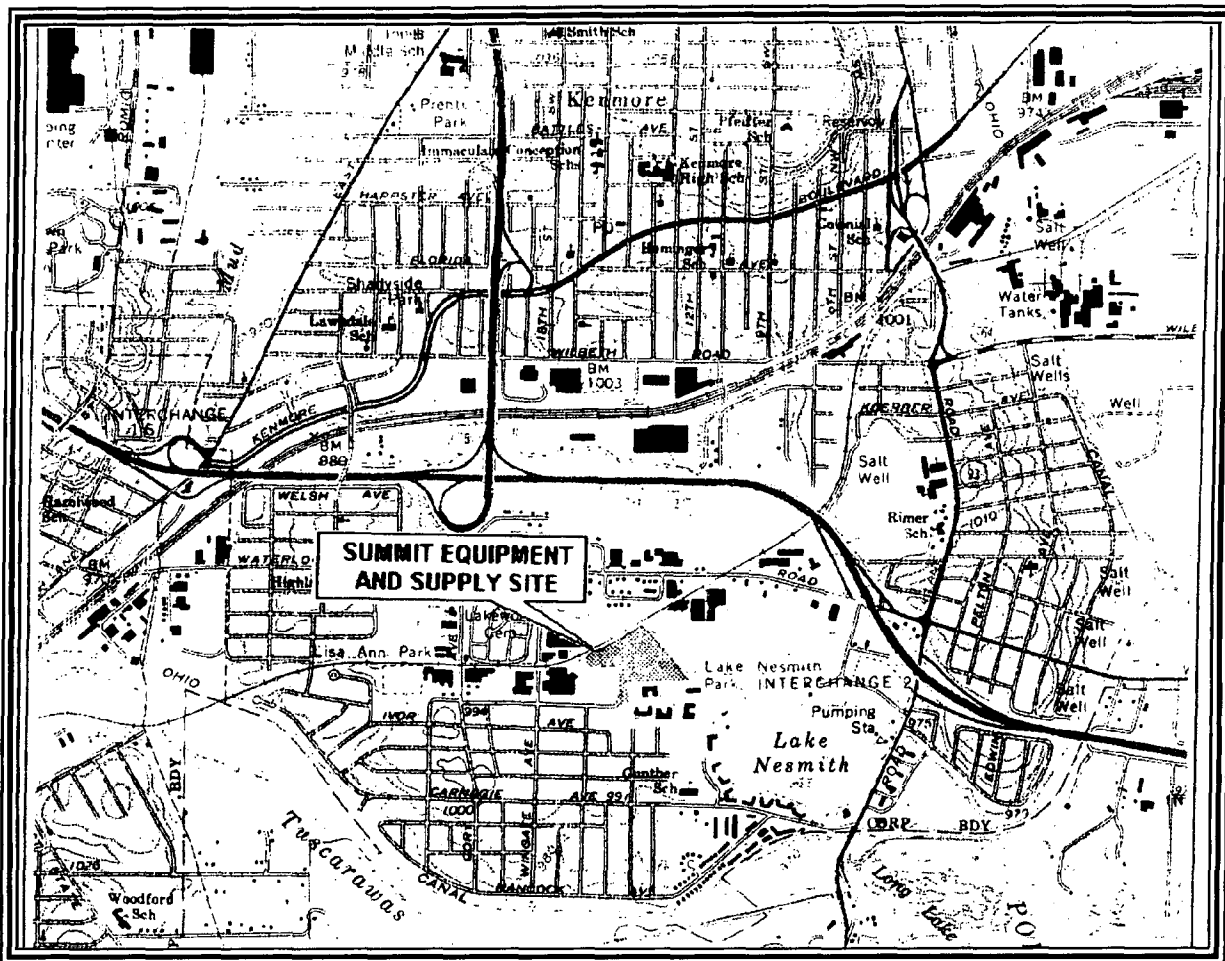
The remedy at the SES site is protective of human health and the environment.

XI. Next Review

The next review for the SES site will be conducted within five years after the completion of this Five-Year Review report. The completion date of this report is the date of the signature shown on the signature cover attached on the front of the report.

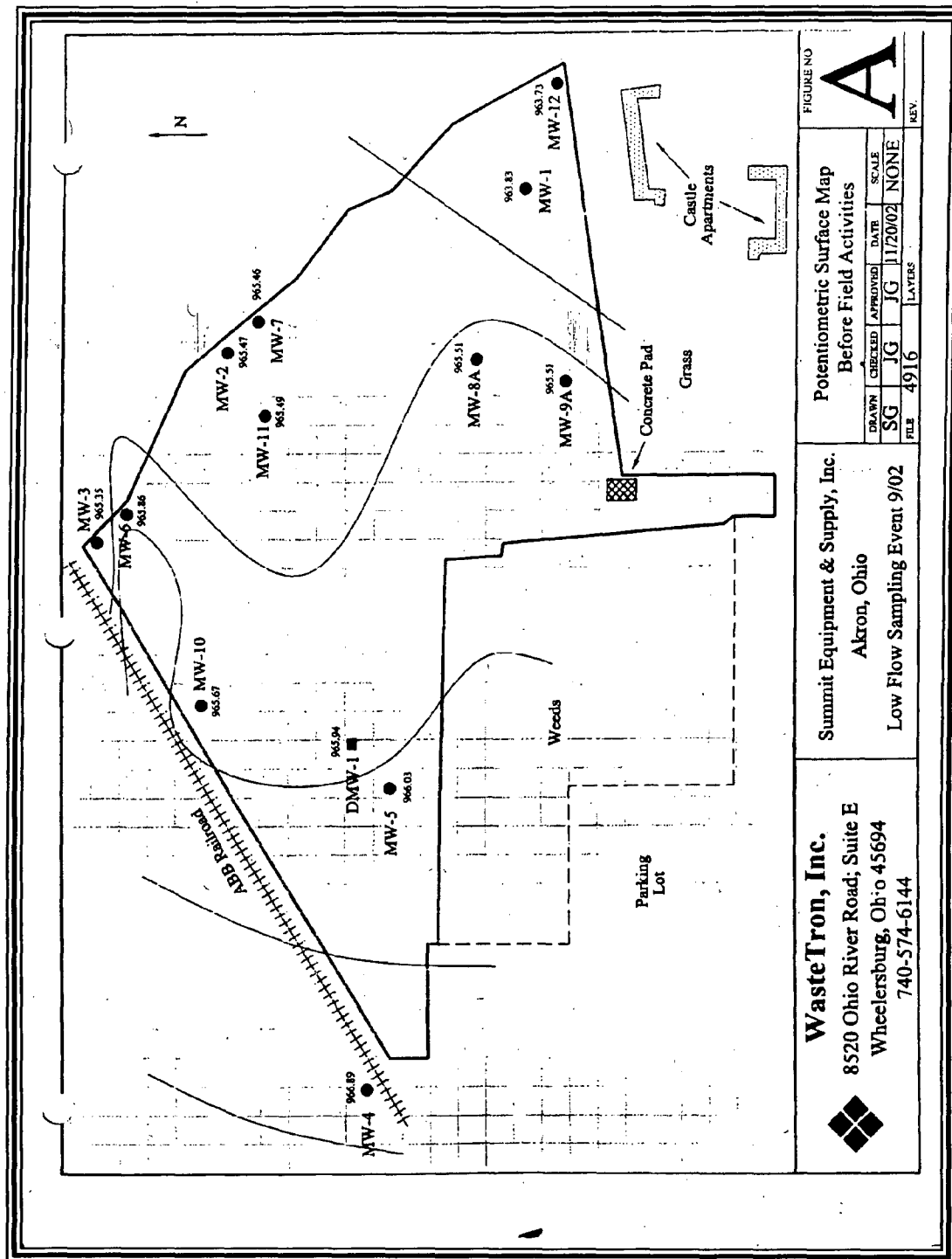
Attachment 1
Site Maps and
Five-Year Review Site Inspection Photographs

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Map showing the location of the Summit Equipment and Supply, Inc. site
in Akron, Ohio

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View from middle of SES site looking Southeast - 5/13/03



View from middle of SES site looking east - 5/13/03

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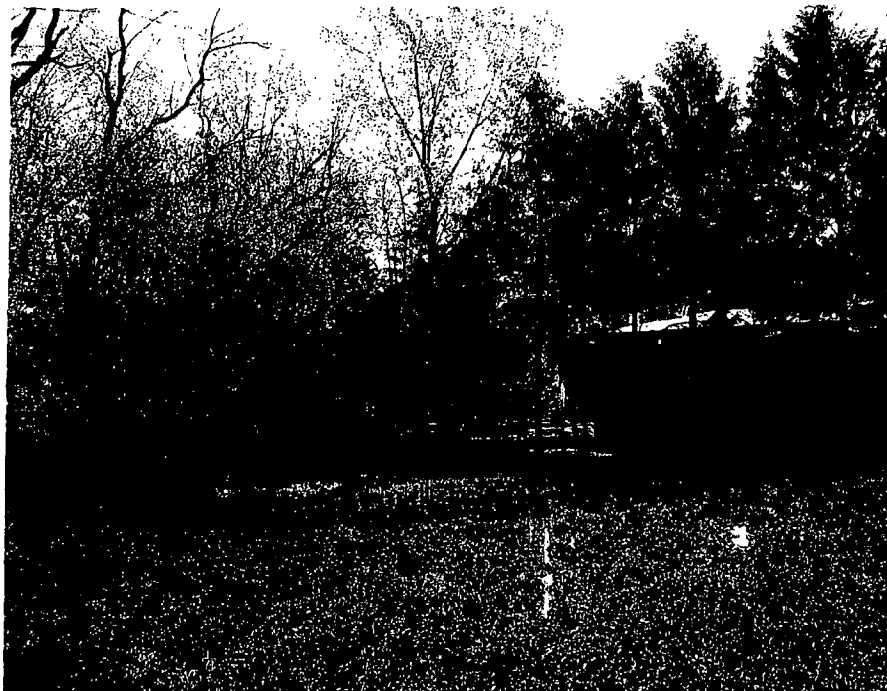


View from middle of SES site looking West - 5/13/03



View from middle of SES site looking North (Note two geese) - 5/13/03

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View from eastern edge of site toward SE (Note MW-1 in foreground) - 5/13/03



View from eastern edge of SES site looking west - 5/13/03

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View of Monitoring Wells MW-2 (left) and MW-7 - 5/13/03



View from northern fenceline of SES site to the west - 5/13/03

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View of industrial area along western edge of SES site - 5/13/03

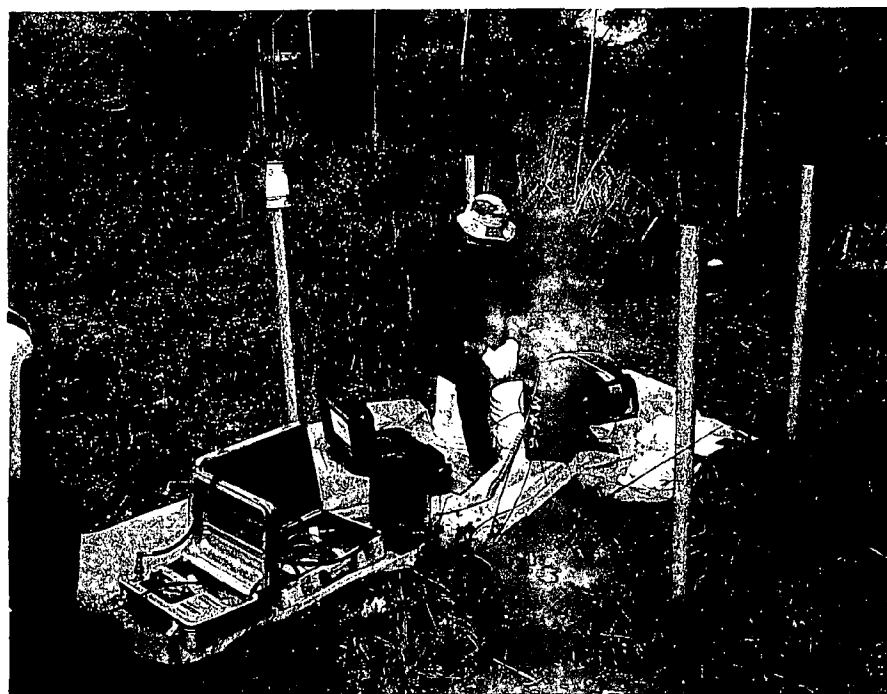


View of Monitoring Well MW- 6 along northern edge of SES site - 5/13/03

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View from northern edge of SES site looking south - 5/13/03



Sampling being conducted at MW-6 on 5/13/03

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Sampling being conducted at MW-6 on 5/13/03